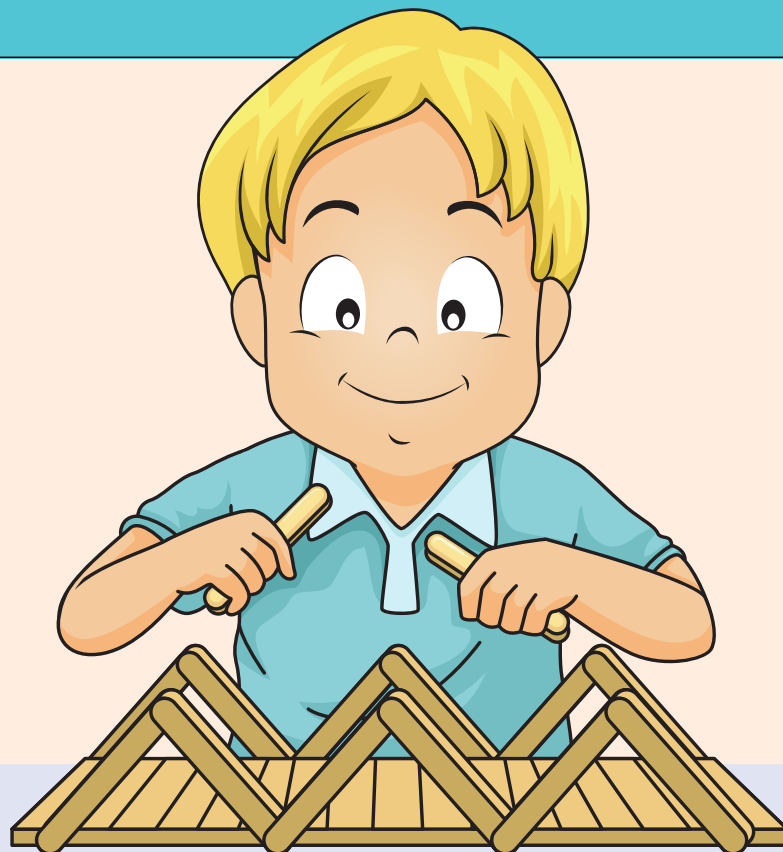


Columbia Gorge

STEM HUB

SCIENCE, TECHNOLOGY, ENGINEERING, & MATHEMATICS

# STEM NIGHT KITS



# MAKE & TAKE

**Make & Take Activities** involve consumable materials, so children & families take their creations home!

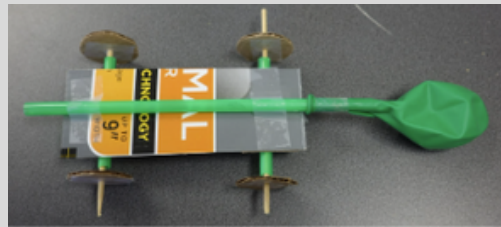


## LEGO BUILD

Using random Legos, create anything imaginable, or use the prompt cards for a more complex challenge.

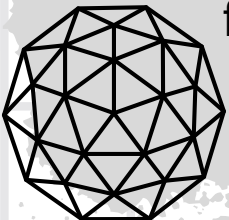
## BALLOON POWERED CARS

Using everyday materials and a balloon, power a vehicle to glide along the floor - experiment with different design elements to increase speed and distance.



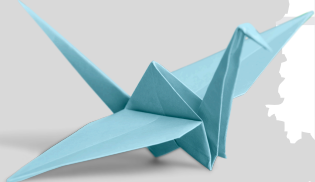
## CLAY CREATIONS

Explore architecture by building geodesic domes from toothpicks & modeling clay



## ORIGAMI

Follow directions to create origami! Animals, flowers and shapes!



## LED FLASHLIGHTS



Experiment with creating a simple circuit LED flashlight.

# MAKE & TAKE

**Make & Take Activities** involve consumable materials, so children & families take their creations home!

## ANIMAL SCAT

Using clay and other materials, create real-looking animal "scat!"



## COSTUME CREATIONS

Follow the directions to turn a paper bag into a vest or a cape. Then, decorate with any of the materials available.



## FOIL BOATS

Using foil, create a boat that can hold weight and still float – experiment with boat design and weight.



## CATAPULTS

Using simple materials, build a model catapult and then improve the design for increased distance & speed.



## SLIME

Combine icky sticky ingredients to make your own slime to take home.



## 3DODDLER

Use the 3Doodler pen to create 3D art and structures straight from your imagination.



# FREE BUILD

**Free Build Activities** allow children & families to explore open-ended building materials - using their imagination or build cards to guide them.



**LEGO**

## BRISTLE BLOCKS



**RODS & BALLS**



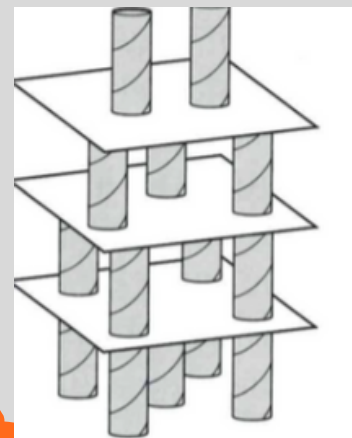
**K'NEX**

## MAGNETIC TILES



## TUMBLING TOWER

Using cardboard tubes and cardboard squares, learn how engineers build structures that are strong & stable!



## MAGNETIC BLOCKS



# CHALLENGES

**Challenge Activities** provide children & families with an activity that has specific constraints & goals.

## BEE BOT ROBOTS

Build a maze out of popsicle sticks and then code the robots to move through the maze.



## CUP PYRAMID

Work in teams to build a cup pyramid – but with a twist! You can't use your hands!



## BIRD NEST

Using only the materials provided, build a nest to hold 3 eggs (marbles).



## HOUSE OF CARDS

Discover building with just playing cards – uncover strengths in different card configurations.



# STEM CAREERS

**STEM Careers Activities** allow children & families to learn about STEM Careers through exploration!

## BOXING BEANS

Experiment with package design to determine the most efficient way to hold a product.

**STEM Career:**  
**Advanced Manufacturing**



## DOMINO DIVING BOARD

Make a cantilever and gain a better understanding of how engineers help us to “hang out” safely.

**STEM Career: Achitecture**

## GLUE IS THE CLUE

Demonstrate how composite materials are used in engineering to make something stronger.

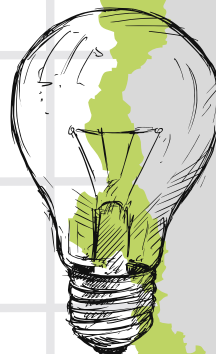
**STEM Career:**  
**Engineering**



## SNAP CIRCUITS

Experiment with Snap Circuits electrical components. Kit includes directions for projects.

**STEM Career: Electrical**



# STEM CAREERS

**STEM Careers Activities** allow children & families to learn about STEM Careers through exploration!

## SOLID GROUND

Demonstrate how different Earth materials hold up to pressure.

**STEM Career: Geology**



## LET'S COMMUNICATE

One partner builds a simple structure, then provides verbal directions for another person to build the same structure.

**Computational Thinking**



## THRILL SEEKERS

Work together to move marbles through plastic tubing, much like a rollercoaster.

**STEM Career: Aerodynamics**





# STEM FUN

**STEM Fun Activities** are quick & easy experiments for children & families to enjoy together!

## ANCIENT ARCHITECTURE



Follow Lego-like instructions to build arches and domes. Historical information provided, too!

## INSPIRED BY NATURE

Match human-made contraptions with those that match nature! Discover how nature inspires engineers & inventors!

## MAKE IT LOUD



Experiment with how different materials influence sound, using a cardboard tube.



**DRAFT**

# FREE FAMILY STEM NIGHT

When: Thursday, April 4th

Time: 5 - 7 pm

Where: Grade School Gym

**Join us for:  
free build activities, make &  
take....We can edit for the  
centers you choose.**

**Sponsored by:**



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